

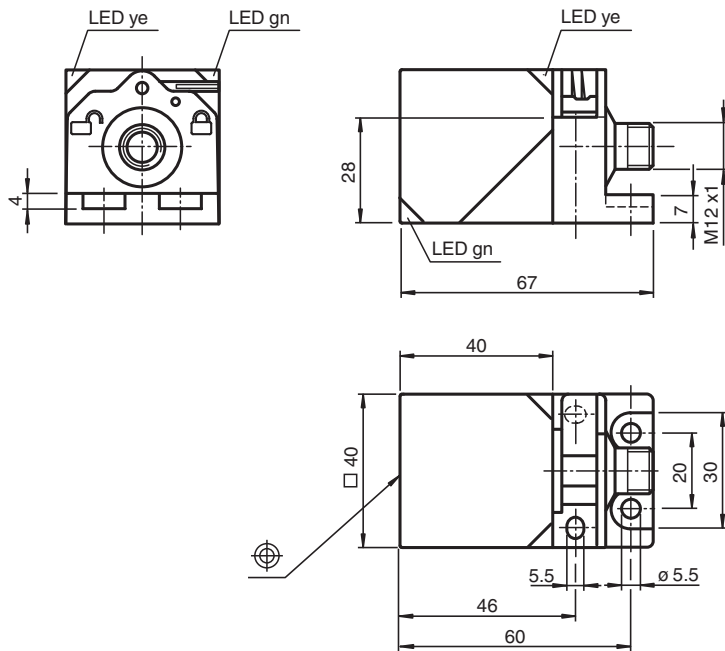


Inductive sensor NBB20-L2-E2-V1-3G-3D

- 20 mm flush
- Sensor head bidirectional and rotatable
- 3-wire DC
- Quick mounting bracket
- 4-way LED indicator
- ATEX-/IECEX-approvals for zone 2/22 (Ex ec/tc)
- Polarity reversal protected



Dimensions



Technical Data

General specifications

Switching function		Normally open (NO)
Output type		PNP
Rated operating distance	s_n	20 mm
Installation		flush
Output polarity		DC
Assured operating distance	s_a	0 ... 16.2 mm
Actual operating distance	s_r	18 ... 22 mm
Reduction factor r_{AI}		0.33
Reduction factor r_{Cu}		0.31

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Technical Data

Reduction factor r_{304}		0.74
Reduction factor r_{Brass}		0.41
Output type		3-wire
Nominal ratings		
Operating voltage	U_B	10 ... 30 V DC
Switching frequency	f	0 ... 440 Hz
Hysteresis	H	typ. 5 %
Reverse polarity protection		reverse polarity protected
Short-circuit protection		pulsing
Voltage drop	U_d	≤ 2 V
Operating current	I_L	0 ... 200 mA
Off-state current	I_r	0 ... 0.5 mA
No-load supply current	I_0	≤ 20 mA
Time delay before availability	t_v	80 ms
Operating voltage indicator		LED, green
Switching state indicator		LED, yellow
Functional safety related parameters		
MTTF _d		1289 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Compliance with standards and directives		
Standard conformity		
Standards		EN IEC 60947-5-2
Approvals and certificates		
IECEx approval		
Equipment protection level Gc (ec)		IECEx TUR 21.0019X
Equipment protection level Dc (tc)		IECEx TUR 21.0020X
ATEX approval		
Equipment protection level Gc (ec)		TÜV 20 ATEX 8525 X
Equipment protection level Dc (tc)		TÜV 20 ATEX 8526 X
UL approval		
		cULus Listed, General Purpose
CCC approval		
Hazardous Location		2024322315005948 2024322315005983
Marine approval		
		DNVGL TAA0000160
Ambient conditions		
Ambient temperature		-25 ... 85 °C (-13 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		
		Connector plug
Housing material		
		PA
Sensing face		
		PA
Degree of protection		
		IP69K
Connector		
Threading		M12 x 1
Number of pins		4
Mass		155 g
Dimensions		
Height		40 mm
Width		40 mm
Length		67 mm
General information		
Use in the hazardous area		see instruction manuals

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Connection Assignment



Connection Assignment

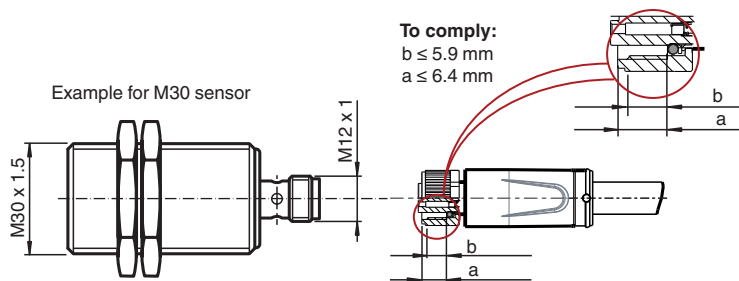


Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)

Installation

Requirement for cable socket to achieve IP degree of protection



b = max. distance from start of thread to seal
 a = max. distance from start of union nut to seal

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